

8 Phase
Fully Actuated w/ EV Preemption
Greenville Signal System



NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
5. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
6. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
7. Pedestrian pedestals are conceptual and shown for reference only. See sheets P1-P3 for pushbutton location details.
8. This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.


LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head	
	With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
-----	2-in Underground Conduit	-----
N/A	Right of Way	-----
	Directional Arrow	
N/A	Wheelchair Ramp	
	Type II Signal Pedestal	
	Optical Detectors	

Signal Upgrade

	Prepared In The Office of:		US 264 Alt - NC 43 (Greenville Boulevard) at Arlington Boulevard	SEAL 
	Division 2 Pitt County Greenville			
	PLAN DATE: April 2015 REVIEWED BY: JPG			
	PREPARED BY: Jeff Spence REVIEWED BY:			
REVISIONS INIT. DATE				

750 N. Greenfield Pkwy, Garner, NC 27529



SCALE

0 40

1" = 40'

DocuSigned by:
Jason Gallaway 6/24/2015

 PROJECT MANAGER DATE

SIG. INVENTORY NO. 02-0034

NEMA LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS						DETECTOR UNITS				
LOOP NO.	SIZE (ft)	DIST. FROM STOPBAR (ft)	TURNS	NEW EXISTING	NEMA PHASE	NEW EXISTING	TIMING		INHIBIT DELAY DURING GREEN?	
							FEATURE	TIME		
1A	6X60	0	2-4-2	- X	1	- X	DELAY	3	YES	
2A	6X6	300	5	- X	2	- X	-	-	NO	
2B	6X6	300	5	- X	2	- X	-	-	NO	
3A	6X60	+5	2-4-2	- X	3	- X	-	-	NO	
4A	6X60	0	2-4-2	- X	4	- X	-	-	NO	
4B	6X60	0	2-4-2	- X	4	- X	DELAY	10	YES	
5A	6X60	0	2-4-2	- X	5	- X	DELAY	3	YES	
6A	6X6	300	5	- X	6	- X	-	-	NO	
6B	6X6	300	5	- X	6	- X	-	-	NO	
7A	6X40	+5	2-4-2	- X	7	- X	-	-	NO	
8A	6X60	+5	2-4-2	- X	8	- X	-	-	NO	
8B	6X60	+5	2-4-2	- X	8	- X	DELAY	10	YES	
S5828	6X6	+480	EXIST	- X	-	- X	SYSTEM	DETECTOR		
S5928	6X6	+480	EXIST	- X	-	- X	SYSTEM	DETECTOR		
S1528	6X6	+350	EXIST	- X	-	- X	SYSTEM	DETECTOR		
S2928	6X6	+350	EXIST	- X	-	- X	SYSTEM	DETECTOR		

EV PREEMPTION

FUNCTION	PRE 3	PRE 4
ZERO PC TIME	N	N
PC THRU YELLOW	Y	Y
MIN PED CLEAR	0*	0*
DELAY TIME	0	0
MIN. GREEN BEFORE PREEMPT	7	7
YELLOW CLEAR BEFORE PREEMPT	0.0*	0.0*
RED CLEAR BEFORE PREEMPT	0.0*	0.0*
PREEMPT DWELL MIN. GREEN	7	7
YELLOW CLR AFTER PREEMPT	0.0*	0.0*
RED CLEAR AFTER PREEMPT	0.0*	0.0*
PREEMPT EXTEND**	2	2

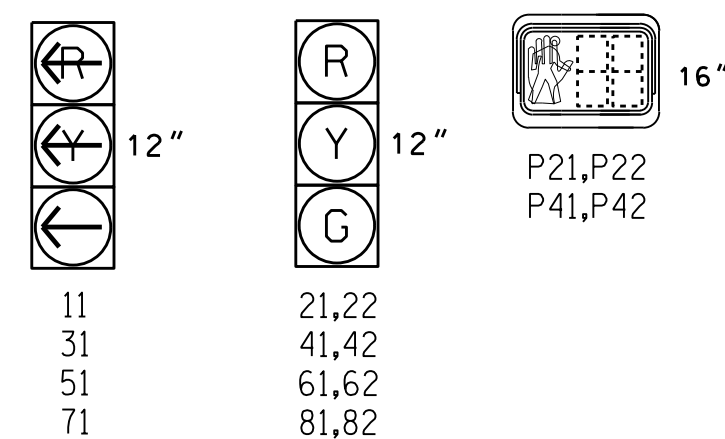
* Time defaults to time used for phase during normal operation
** Program Timing on Optical Detection Unit

TABLE OF OPERATION

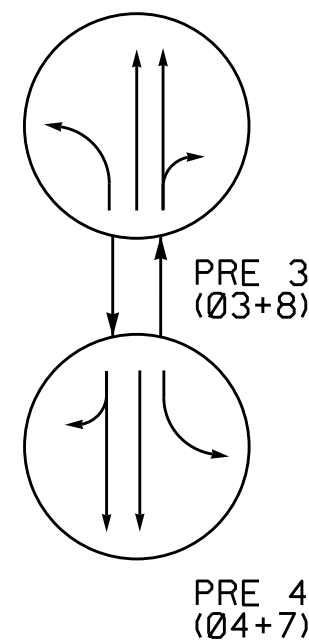
SIGNAL FACE	PHASE										
	0 1 +5	0 1 +6	0 2 +5	0 2 +6	0 3 +7	0 3 +8	0 4 +7	0 4 +8	P R E 3	P R E 4	F L A S H
11	←	←	→	→	→	→	→	→	→	→	→
21,22		R	G	G	R	R	R	R	R	R	Y
31	→	→	→	→	←	←	←	←	←	←	←
41,42	R	R	R	R	R	R	G	G	R	G	R
51	←	→	←	→	→	→	→	→	→	→	→
61,62	R	G	R	G	R	R	R	R	R	R	Y
71	→	→	→	→	←	←	←	←	←	←	←
81,82	R	R	R	R	R	G	G	G	G	R	R
P21,P22	DW	DW	W	W	DW	DW	DW	DW	DW	DW	DR
P41,P42	DW	DW	DW	DW	DW	DW	W	W	DW	DW	DR

SIGNAL FACE I.D.

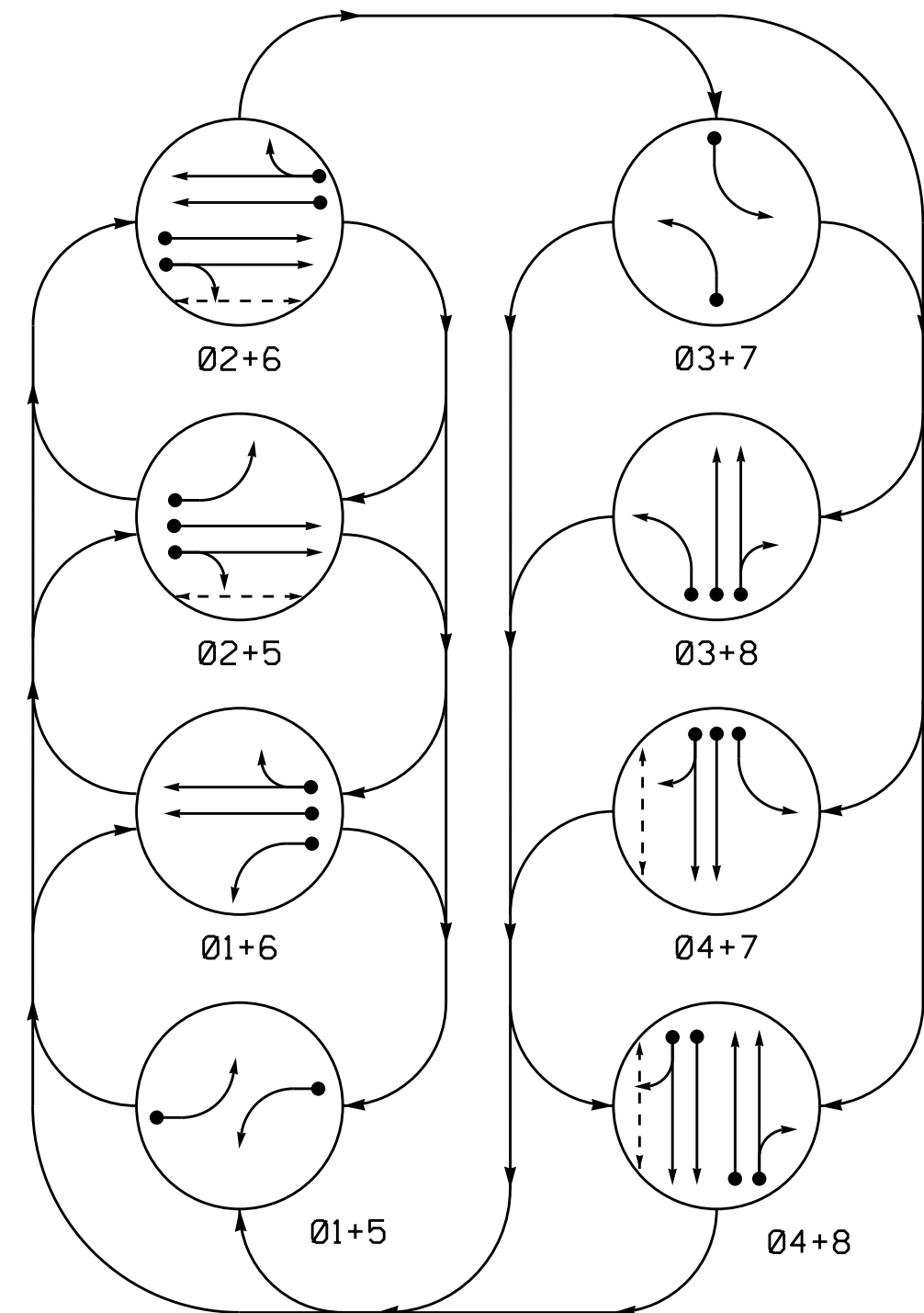
All Heads L.E.D.






EV PREEMPT PHASES

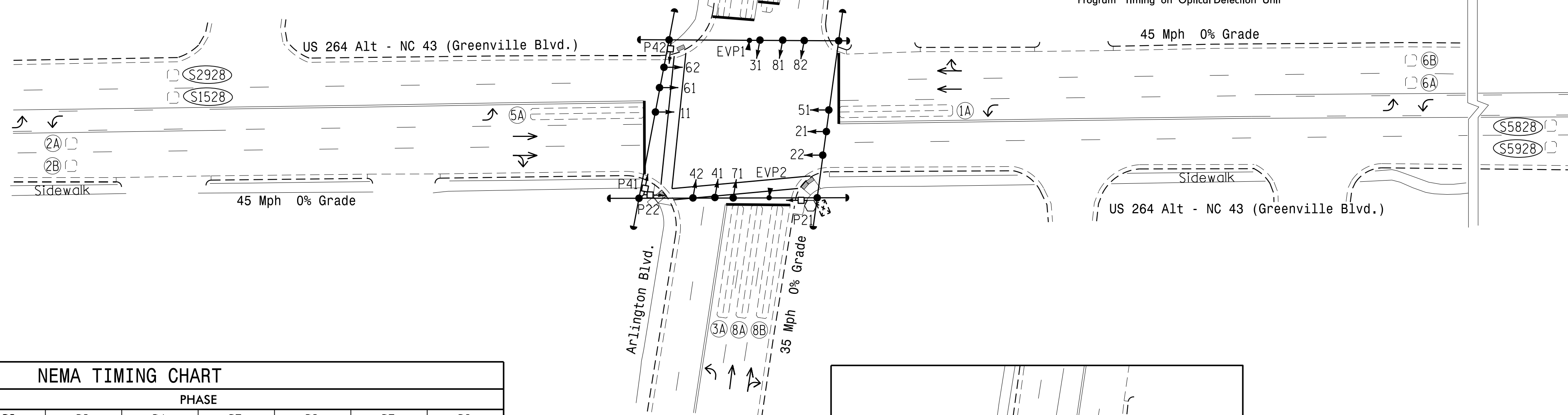


PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- | | |
|---|-------------------------------|
| | DETECTED MOVEMENT |
|  | UNDETECTED MOVEMENT (OVERLAP) |
|  | UNSIGNALIZED MOVEMENT |
|  | PEDESTRIAN MOVEMENT |



NEMA TIMING CHART

FEATURE	PHASE							
	01	02	03	04	05	06	07	08
MINIMUM GREEN *	7 SEC.	12 SEC.	7 SEC.	7 SEC.	7 SEC.	12 SEC.	7 SEC.	7 SEC.
PASSAGE/GAP *	2.0 SEC.	6.0 SEC.	2.0 SEC.	3.0 SEC.	2.0 SEC.	6.0 SEC.	2.0 SEC.	3.0 SEC.
YELLOW CHANGE INT.	3.0 SEC.	4.5 SEC.	3.0 SEC.	3.8 SEC.	3.0 SEC.	4.5 SEC.	3.0 SEC.	3.8 SEC.
RED CLEARANCE	2.6 SEC.	1.4 SEC.	2.4 SEC.	1.8 SEC.	2.8 SEC.	1.3 SEC.	2.4 SEC.	1.7 SEC.
MAX. 1 *	25 SEC.	90 SEC.	30 SEC.	45 SEC.	25 SEC.	90 SEC.	30 SEC.	45 SEC.
RECALL POSITION	NONE	MIN. RECALL	NONE	NONE	NONE	MIN. RECALL	NONE	NONE
VEHICLE CALL MEMORY	NONLOCK	LOCK	NONLOCK	NONLOCK	NONLOCK	LOCK	NONLOCK	NONLOCK
WALK *	— SEC.	7 SEC.	— SEC.	7 SEC.	— SEC.	— SEC.	— SEC.	— SEC.
FLASHING DON'T WALK	— SEC.	18 SEC.	— SEC.	18 SEC.	— SEC.	— SEC.	— SEC.	— SEC.
VOLUME DENSITY	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
ACTUATION B4 ADD *	— VEH.	0 VEH.	— VEH.	— VEH.	— VEH.	0 VEH.	— VEH.	— VEH.
SEC. PER ACTUATION *	— SEC.	1.5 SEC.	— SEC.	— SEC.	— SEC.	1.5 SEC.	— SEC.	— SEC.
MAX. INITIAL *	— SEC.	34 SEC.	— SEC.	— SEC.	— SEC.	34 SEC.	— SEC.	— SEC.
TIME B4 REDUCTION *	— SEC.	15 SEC.	— SEC.	— SEC.	— SEC.	15 SEC.	— SEC.	— SEC.
TIME TO REDUCE *	— SEC.	30 SEC.	— SEC.	— SEC.	— SEC.	30 SEC.	— SEC.	— SEC.
MINIMUM GAP	— SEC.	3.0 SEC.	— SEC.	— SEC.	— SEC.	3.0 SEC.	— SEC.	— SEC.

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

STOPBAR AND CROSSWALK LOCATIONS

